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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------|------------------|
| 10/034,523 | 12/28/2001 | James H. Kaufman | ARC920010089US1 | 1662 |
| 33360 | 7590 | 06/29/2005 | EXAMINER | |
| MARK D. MCSWAIN IBM ALMADEN RESEARCH CENTER, IP LAW DEPT. 650 HARRY ROAD CHTA/J2B SAN JOSE, CA 95120 | | | SCHLAIFER, JONATHAN D | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2178 | | |
| DATE MAILED: 06/29/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/034,523 | KAUFMAN ET AL. |
| | Examiner | Art Unit |
| | Jonathan D. Schlaifer | 2178 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 11 April 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,10,15,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,10,15,17 and 18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 December 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/11/05
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

1. This action is responsive to amendment to application 10/034,523 filed on 4/11/2005, with prior art filed on 4/11/2005.
2. Claims 1, 10, 15, and 17-18 are pending in the case. Claims 1 and 17-18 are independent claims. Claims 2-9, 11-14, and 16 have been cancelled.
3. The rejections of claims 1, 10 and 15 under 35 U.S.C. 101 have been withdrawn as required by amendment.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1 and 17-18 remain rejected under 35 U.S.C. 102(b) as being anticipated by Gabbe et al. (USPN 5,550,965—filing date 12/27/1993), hereinafter Gabbe.**
5. **Regarding independent claim 1,** Gabbe discloses a method for generating a table of contents for a document using information in said document (see col. 2, lines 1-10, discloses method for generating a table of contents), comprising: building a model of said document including an initial semantic structure (see col. 6, lines 60-67, discloses knowledge representation based modeling), detecting hierarchical changes in said semantic structure spanning different scales; (see col. 8, lines 35-67, the semantic structure is filtered to establish structural features based on scaling blocks; Figure 7; a table of contents is assembled, which inherently requires hierarchy) and ordering said

changes into entries in said table of contents based on scale span (in col. 10, line 55—col. 11, line 20, the table of contents is generated).

6. **Regarding independent claim 17**, it is a system for performing the method of claim 1 and is rejected under similar rationale.
7. **Regarding independent claim 18**, it is computer program encoded on a medium for performing the method of claim 1 and is rejected under similar rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gabbe, further in view of Ratakonda (USPN 5,956,026—filing date 12/19/1997), further in view of Hutson (USPN 5,455,806—filing date 12/30/1994).**
9. **Regarding dependent claim 10**, Gabbe fails to disclose that the building step comprises the further steps of: defining a vector of terms occurring in said document; and mapping said document into a vector space by projecting scaled term occurrence histogram data onto said vector of terms. However, Ratakonda, in col. 9, lines 40-60 discloses setting up a vector of terms and projecting histogram data onto it. It would have been obvious to one of ordinary skill in the art at the time of the invention to perform the steps of setting up a vector of terms and projecting histogram data as in Ratakonda in the context of Gabbe because it would aid in clustering similar images together. Gabbe fails to disclose

summarizing said terms using singular-value decomposition. However, Hutson discloses that one may summarize using singular-value decomposition in col. 17, line 30—col. 18, line 10. It would have been obvious to one of ordinary skill in the art at the time of the invention to summarize using singular-value decomposition in order to take advantage of an efficient mathematical tool for analyzing the data.

10. **Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gabbe, further in view of Stanke (USPN 5,996,415—filing date 4/30/1997).**
11. **Regarding dependent claim 15,** Gabbe fails to disclose that said detecting further comprises applying successive smaller scale filter windows to said model according to said initial semantic structure to construct a map of said changes versus scale; identifying local peaks in said contour map, said peaks being points of maximum vector derivative magnitude; tracing said local peaks back to semantic structure change origin point; and measuring span of scales over which each said change exists. However, in col. 18, line 55—col. 19, line 10, Stanke describes progressive filtration involving the identification of peaks. The advantage of this filtration is a very compact representation of the information. It would have been obvious to one of ordinary skill in the art at the time of the invention to use progressive filtration with peaks in the manner of Stanke because it results in a very compact representation of the information.

Response to Arguments

12. Applicant's arguments filed 4/11/2005 have been fully considered but they are not persuasive.

13. With respect to the arguments regarding claim 1, the applicant claims that Gabbe fails to teach certain things necessary for the rejection. The Examiner has updated the rejection and refers the Applicant to the rejection to find these elements of the art.
14. Applicant's arguments with respect to claim 10 have been considered but are moot in view of the new ground(s) of rejection.
15. Applicant claims that Stanke lacks certain elements necessary to reject claim 15. The Examiner has reviewed the cited passage and still believes that it provides sufficient art support to reject the claim.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 4,995,011 (filing date 9/20/1989)—Spiesberger

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan D. Schlaifer whose telephone number is (571) 272-4129. The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS

William L. Bashore
WILLIAM BASHORE
PRIMARY EXAMINER
6/23/2005